C. Remarks:

The claims have been amended in order to place the application in better form.

The claims stand rejected under 35 U.S.C. 112, first paragraph, in that the specification contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most connected, to make and/or use the invention. This rejection is respectfully traversed.

The Examiner has taken the position that the specification provides insufficient evidence that after contacting mesenchymal stem cells (MSCs) in vitro with an antigen, the MSCs of the claimed method would process said antigen into an antigen fragment for presentation by the MSCs.

The Examiner also has stated that the Paul reference, published in 1999, fails to recognize MSCs as antigen presenting cells, or APCs.

As stated previously in Applicants' Amendment filed December 4, 2002, Applicants have shown in Example 1 that mesenchymal stem cells, which do not produce co-stimulatory molecules in a sufficient amount to activate T-cells, can process and present antigens or fragments to T-cells in order to induce tolerance to such antigens. Furthermore, in the Final Rejection of September 19, 2002, the Examiner admitted that T-cell hyporesponsiveness with tetanus toxoid had been shown by Applicants.

The Examiner's reliance on Paul, like his previous reliance on Janeway, is misguided. Paul, like Janeway, merely discusses antigen presenting cells and characteristics thereof. Also, like Janeway, there is nothing in Paul that states that mesenchymal stem cells cannot be employed as antigen presenting cells. Paul, like Janeway, merely does not mention mesenchymal stem cells as an example of cells which may be used to present antigens to T-cells. This omission by Paul, however, should not be construed by the Examiner that Paul teaches

those skilled in the art that mesenchymal stem cells may not be used as antigen presenting cells, or that mesenchymal stem cells cannot be used to present antigens to T-cells in order to inhibit a T-cell response.

The Examiner is taking the position that Applicants must demonstrate that MSCs are capable of antigen processing, and that because Applicants have not made such a demonstration, the claims are not enabled.

The Examiner is reminded that the burden is not upon Applicants to show enablement, but is upon the Examiner to show that the claims are not enabled. (See In Re Marzocchi, 169 U.S.P.Q. 367 (C.C.P.A. 1971)). In attempting to show that the claims are not enabled, the Examiner has relied, during the prosecution of the above-identified application, upon two references, Janeway and Paul. These two references merely do not give mesenchymal stem cells as an example of cells that can be used as antigen presenting cells. The references do not say that mesenchymal stem cells cannot be used as antigen presenting cells, and the Examiner has provided no evidence, other than sheer speculation, which would suggest to those skilled in the art that mesenchymal stem cells could not be employed as antigen presenting cells. Thus, the Examiner has not met his burden in showing that the specification does not provide an enabling disclosure.

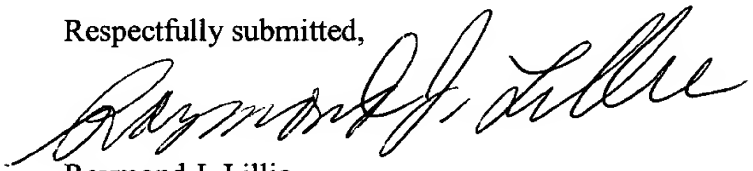
As stated previously, Applicants, through Example 1, have proven the principle that mesenchymal stem cells, which do not produce co-stimulatory molecules in a sufficient amount to activate T-cells, can present an antigen or a fragment thereof to T-cells in order to induce tolerance to the antigen. Applicants, through Example 1, demonstrated that mesenchymal stem cells can be pulsed with an antigen, and that such pulsed mesenchymal stem cells can present such antigen or fragment thereof to T-cells in order to induce tolerance to the antigen upon subsequent encounter of the T-cells with professional antigen presenting cells which present the

antigen or a fragment thereof. The Examiner has provided no evidence to show that such mesenchymal stem cells cannot process or present antigens or fragments thereof to T-cells in order to induce tolerance to the antigens. Thus, because Applicants have proven the principle that mesenchymal stem cells can present antigens to T-cells in order to induce tolerance to the antigens, and the Examiner has not proven otherwise, the specification provides an enabling disclosure. It is therefore respectfully requested that the rejection under 35 U.S.C. 112, first paragraph, be reconsidered and withdrawn.

With respect to the rejection of Claims 21-36 under 35 U.S.C. 112, second paragraph, Claims 21-36 have been rewritten as Claims 37-52 in accordance with the Examiner's helpful suggestions, and the rejection hereby is rendered moot. The cancellation of Claims 21-36 without prejudice, however, is not to be construed as an admission by Applicants or Applicants' attorneys that such claims are not patentable.

For the above reasons and others, this application is in condition for allowance, and it is therefore respectfully requested that the rejections be reconsidered and withdrawn and a favorable action is hereby solicited.

Respectfully submitted,



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